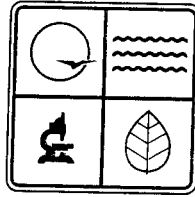


STATE OF MISSOURI  
**DEPARTMENT OF NATURAL RESOURCES**  
MISSOURI AIR CONSERVATION COMMISSION

**PERMIT BOOK**



## PERMIT TO CONSTRUCT

Under the authority of RSMo 643 and the Federal Clean Air Act the applicant is authorized to construct the air contaminant source(s) described below, in accordance with the laws, rules and conditions as set forth herein.

Permit Number: **08 2 0 0 6 - 0 0 7**      Project Number: **2006-05-038**  
Owner: **Independent Stave Company Inc.**  
Owner's Address: **1078 South Jefferson, P.O. Box 104, Lebanon, MO 65536**  
Installation Name: **Independent Stave Company Inc.**  
Installation Address: **1078 South Jefferson, P.O. Box 104, Lebanon, MO 65536**  
Location Information: **Laclede County, S34N, T12, R16W**

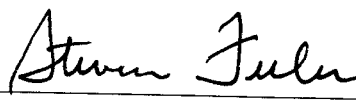
Application for Authority to Construct was made for:

Installation of two (2) rip saws, four (4) chop saws, one (1) ban saw, and a planer (EP-41), a chipper (EP-42), four (4) bays (EP-43), use of a bucket loader for transferring material (EP-44), and installation of a batch oven (EP-45). This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

- 
- ☐ Standard Conditions (on reverse) are applicable to this permit.
- ☒ Standard Conditions (on reverse) and Special Conditions (listed as attachments starting on page 2) are applicable to this permit.

**AUG 28 2006**

EFFECTIVE DATE



DIRECTOR OR DESIGNEE  
DEPARTMENT OF NATURAL RESOURCES

## STANDARD CONDITIONS:

Permission to construct may be revoked if you fail to begin construction or modification within two years from the effective date of this permit. Permittee should notify the Air Pollution Control Program if construction or modification is not started within two years after the effective date of this permit, or if construction or modification is suspended for one year or more.

**You will be in violation of 10 CSR 10-6.060 if you fail to adhere to the specifications and conditions listed in your application, this permit and the project review.** Specifically, all air contaminant control devices shall be operated and maintained as specified in the application, associated plans and specifications.

You must notify the Air Pollution Control Program of the anticipated date of start up of this (these) air contaminant source(s). The information must be made available not more than 60 days but at least 30 days in advance of this date. Also, you must notify the Department of Natural Resources Regional Office responsible for the area within which you are located within 15 days after the actual start up of this (these) air contaminant source(s).

A copy of this permit and permit review shall be kept at the installation address and shall be made available to Department of Natural Resources' personnel upon request.

You may appeal this permit or any of the listed Special Conditions as provided in RSMo 643.075. If you choose to appeal, the Air Pollution Control Program must receive your written declaration within 30 days of receipt of this permit.

If you choose not to appeal, this certificate, the project review, your application and associated correspondence constitutes your permit to construct. The permit allows you to construct and operate your air contaminant source(s), but in no way relieves you of your obligation to comply with all applicable provisions of the Missouri Air Conservation Law, regulations of the Missouri Department of Natural Resources and other applicable federal, state and local laws and ordinances.

The Department of Natural Resources has established the Outreach and Assistance Center to help in completing future applications or fielding complaints about the permitting process. You are invited to contact them at 1-800-361-4827 or (573) 526-6627, or in writing addressed to Outreach and Assistance Center, P.O. Box 176, Jefferson City, MO 65102-0176.

The Air Pollution Control Program invites your questions regarding this air pollution permit. Please contact the Construction Permit Unit at (573) 751-4817. If you prefer to write, please address your correspondence to the Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102-0176, attention Construction Permit Unit.

2006-05-038

Independent Stave Company Inc.

1078 South Jefferson, P.O. Box 104, Lebanon, MO 65536

Independent Stave Company Inc.

1078 South Jefferson, P.O. Box 104, Lebanon, MO 65536

Laclede County, S34N, T12, R16W

Installation of two (2) rip saws, four (4) chop saws, one (1) ban saw, and a planer (EP-41), a chipper (EP-42), four (4) bays (EP-43), use of a bucket loader for transferring material (EP-44), and installation of a batch oven (EP-45). This review was conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*.

Page No.	2
Permit No.	
Project No.	2006-05-038

## SPECIAL CONDITIONS:

The permittee is authorized to construct and operate subject to the following special conditions:

*The special conditions listed in this permit were included based on the authority granted the Missouri Air Pollution Control Program by the Missouri Air Conservation Law (specifically 643.075) and by the Missouri Rules listed in Title 10, Division 10 of the Code of State Regulations (specifically 10 CSR 10-6.060). For specific details regarding conditions, see 10 CSR 10-6.060 paragraph (12)(A)10. "Conditions required by permitting authority."*

Independent Stave Company Inc.  
Laclede County, S34N, T12, R16W

1. Carbon Monoxide Emission Limitation
  - A. Independent Stave Company Inc. shall emit less than 250 tons of carbon monoxide (CO) in any consecutive 12 month period from the entire installation.
  - B. Independent Stave Company Inc. shall maintain an accurate record of CO emitted into the atmosphere from the entire installation. Attachment A or an equivalent form shall be used for this purpose. Independent Stave Company Inc. shall maintain all records required by this permit for not less than five (5) years and shall make them available immediately to any Missouri Department of Natural Resources' personnel upon request.
  - C. Independent Stave Company Inc. shall report to the Air Pollution Control Program's Enforcement Section, P.O. Box 176, Jefferson City, Missouri 65102, no later than ten (10) days after the end of the month during which the records from Special Condition Number 1.B indicate that the source exceeds the limitation of Special Condition Number 1.A.
2. Control Devices
  - A. The fabric filter for the saws and the planer (EP-41) must be in use at all times when any of the equipment associated with the fabric filter is in operation. The fabric filter shall be operated and maintained in accordance with manufacturer's specification.
  - B. The cyclone for the chipper (EP-42) must be in use at all times when the chipper associated with the cyclone is in operation. The cyclone shall be operated and maintained in accordance with manufacturer's specification.

REVIEW OF APPLICATION FOR AUTHORITY TO CONSTRUCT AND OPERATE  
SECTION (5) REVIEW

Project Number: 2006-05-038  
Installation ID Number: 105-0001  
Permit Number:

Independent Stave Company Inc.  
1078 South Jefferson, P.O. Box 104,  
Lebanon, MO 65536

Complete: May 12, 2006  
Reviewed: June 30, 2006

Parent Company:  
Independent Stave Company Inc.  
1078 South Jefferson, P.O. Box 104  
Lebanon, MO 65536

Laclede County, S34N, T12, R16W

REVIEW SUMMARY

- Independent Stave Company Inc. has applied for authority to install two (2) rip saws, four (4) chop saws, one (1) ban saw, and a planer (EP-41), a chipper (EP-42), four (4) bays (EP-43), and a batch oven (EP-45) and for use of a bucket loader for transferring material (EP-44). Hazardous Air Pollutant (HAP) emissions are not expected from the proposed equipment
- None of the New Source Performance Standards (NSPS) apply to the proposed equipment.
- None of the National Emission Standards for Hazardous Air Pollutants (NESHAPs) or currently promulgated Maximum Achievable Control Technology (MACT) regulations apply to the proposed equipment.
- A fabric filter and cyclone are being used to control the particulate matter less than ten (10) microns in diameter (PM<sub>10</sub>) emissions from the saws and planer (EP-41) and chipper, respectively.
- This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all pollutants are below de minimis levels.
- This installation is located in Laclede County, an attainment area for all criteria air pollutants.
- This installation is not on the List of Named Installations [10 CSR 10-6.020(3)(B), Table 2].
- Ambient air quality modeling was not performed since potential emissions of the

application are below de minimis levels.

- Emissions testing is not required for the equipment.
- A revision to your Intermediate Operating Permit is required for this installation within 30 days of equipment startup.
- Approval of this permit is recommended with special conditions.

## INSTALLATION DESCRIPTION

The Independent Stave Company operates a wine barrel toaster in Lebanon, Missouri. The company has submitted an intermediate operating permit application received by the Air Pollution Control Program on June 3, 2002 requesting limits to less than 100 tons per year for all criteria pollutants. These limits proposed in the operating permit must be met. However, for construction permits, the facility needs to emit less than 250 tons per year to remain a minor source. Therefore, since carbon monoxide is the only pollutant with potential emissions above 250 tons per year, an annual emission limitation is given in this permit for carbon monoxide

The following permits have been issued to Independent Stave Company Inc. from the Air Pollution Control Program.

Table 1: Issued Construction Permits

Permit Number	Description
0995-014	Installation of a wood/bark waste fired boiler for wine barrel toasting.
072001-008	Installation of a bucket loader, a metering bin and hammermill with baghouse number 9.
0995-014A	Installation of a wine barrel toaster
092002-024	Installation of a process where oak wood dust is drawn out of an enclosed fuel bin and dropped to a storage pile to be loaded by a front end loader and into a semi trailer to be hauled away.

## PROJECT DESCRIPTION

In order to create some new products for the wine industry, Independent Stave Company Inc. located in Lebanon, Missouri, is adding some new processes to its operation. The three new processes as well as ample storage for raw and finished product will be located in a new building.

The first process will involve using defective staves as raw product. They will be sent through a rip saw and chop saw to produce a wooden cube similar in size to sugar cubes. These cubes will be heated or “toasted” in an existing batch style oven and then packaged as finished product. Dust from the saws are collected in a Pulse Jet Bag house (EP-41). The maximum hourly design rate (MHDR) for each of the saws is 0.75 tons of wood processed per hour.

The second process also uses defective staves as raw product. The defective staves are sent through a rip saw, chop saw, band saw, and planer to create new staves. These staves are then toasted in an existing batch style oven and packaged as finished product. Dust from the saws are collected in the same Pulse Jet Bag house (EP-41). The MHDR for each of the saws and planer is 0.75 tons of wood processed per hour.

The last process uses oak lumber as the raw product. The lumber is fed to a chipper with an associated cyclone to create chips (EP-42). These chips are then conveyed via a closed conveyance system to one of four bays (EP-43). From here, they are moved by a bucket loader (EP-44) to an existing hopper for further processing or put into the Liquefied Petroleum (LP) Gas Fired Batch Oven (EP-45) for toasting and then packaged as finished product. The MHDR for the chipper, bay vents, loader is 1.0 ton of wood processed per hour. The MHDR for the 3.0 mmBTU per hour batch oven is 0.03 Mgal per hour.

## EMISSIONS/CONTROLS EVALUATION

The main air pollutants of concern for the facility is PM<sub>10</sub>. For the equipment in the woodworking area, PM<sub>10</sub> emissions were determined using emission factors from the Environmental Protection Agency document Factor Information Retrieval (FIRE) V6.24, *Source Classification Codes and Emission Factors Listing for Criteria Air Pollutants* (SCC # 3-07-008-02, 3-07-008-03, 3-07-030-01). A capture efficiency of 90% and control efficiency of 96.7% was used for the fabric filter to control PM<sub>10</sub> emissions from the woodworking area. A capture efficiency of 90% and control efficiency of 96.7% was used for the baghouse to control PM<sub>10</sub> emissions from the planer and saws (EP-41). A capture efficiency of 90% and control efficiency of 90% was used for the cyclone to control PM<sub>10</sub> emissions from the chipper (EP-42). Emission factors from EPA's FIRE (SCC # 1-02-010-02) were used to determine potential emissions from the batch oven.

Existing potential emissions were taken from Permit Number 092002-024. Existing actual emissions were taken from the installation's 2005 Emission Inventory Questionnaire (EIQ). Potential emissions of the application represent the potential of the new equipment, assuming continuous operation (8760 hours per year). The following table provides an emissions summary for this project.

Table 2: Emissions Summary (tons per year)

Pollutant	Regulatory <i>De Minimis</i> Levels	Existing Potential Emissions	Existing Actual Emissions (2005 EIQ)	Potential Emissions of the Application	New Installation Conditioned Potential
PM <sub>10</sub>	15.0	113.19	20.21	4.54	N/A
SOx	40.0	1.88	2.96	<0.01	N/A
NOx	40.0	8.96	59.24	2.50	N/A
VOC	40.0	73.71	4.53	0.07	N/A
CO	100.0	341.95	71.27	0.42	<250
HAPs	10.0/25.0	N/D	N/D	N/D	N/A

N/A = Not Applicable; N/D = Not Determined

## PERMIT RULE APPLICABILITY

This review was conducted in accordance with Section (5) of Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*. Potential emissions of all criteria pollutants are below de minimis levels.

## APPLICABLE REQUIREMENTS

Independent Stave Company Inc. shall comply with the following applicable requirements. The Missouri Air Conservation Laws and Regulations should be consulted for specific record keeping, monitoring, and reporting requirements. Compliance with these emission standards, based on information submitted in the application, has been verified at the time this application was approved. For a complete list of applicable requirements for your installation, please consult your operating permit.

### GENERAL REQUIREMENTS

- *Submission of Emission Data, Emission Fees and Process Information*, 10 CSR 10-6.110  
The emission fee is the amount established by the Missouri Air Conservation Commission annually under Missouri Air Law 643.079(1). Submission of an Emissions Inventory Questionnaire (EIQ) is required April 1 for the previous year's emissions.
- *Operating Permits*, 10 CSR 10-6.065
- *Restriction of Particulate Matter to the Ambient Air Beyond the Premises of Origin*, 10 CSR 10-6.170
- *Restriction of Emission of Visible Air Contaminants*, 10 CSR 10-6.220
- *Restriction of Emission of Odors*, 10 CSR 10-3.090

### SPECIFIC REQUIREMENTS

- *Restriction of Emission of Particulate Matter From Industrial Processes*, 10 CSR 10-6.400
- *Restriction of Emission of Sulfur Compounds*, 10 CSR 10-6.260
- *Maximum Allowable Emissions of Particulate Matter From Fuel Burning Equipment Used for Indirect Heating*, 10 CSR 10-3.060



## STAFF RECOMMENDATION

On the basis of this review conducted in accordance with Section (5), Missouri State Rule 10 CSR 10-6.060, *Construction Permits Required*, I recommend this permit be granted with special conditions.

\_\_\_\_\_  
Susan Heckenkamp  
Environmental Engineer

\_\_\_\_\_  
Date

## PERMIT DOCUMENTS

The following documents are incorporated by reference into this permit:

- The Application for Authority to Construct form, dated May 11, 2006, received May 12, 2006, designating Independent Stave Company Inc. as the owner and operator of the installation.
- U.S. EPA document AP-42, *Compilation of Air Pollutant Emission Factors*, Fifth Edition.

## Attachment A – Carbon Monoxide Compliance Worksheet

Independent Stave Company Inc.  
Laclede County, S34N, T12, R16W  
Project Number: 2006-05-038  
Installation ID Number: 105-0001  
Permit Number:

This sheet covers the period from \_\_\_\_\_ to \_\_\_\_\_.  
(month, year) (month, year)

**Copy as needed.**

Fuel Used	Column A	Column B	Column C
	(a) Monthly Amount of Fuel Combusted (include units)	(b) CO Emission Factor (lbs/unit)	(c) Monthly CO Emissions (Tons)
(d) Total CO Emissions Calculated for this Month in Tons:			
(e) 12-Month CO Emissions Total from Previous Month's Attachment A, in Tons:			
(f) Monthly CO Emissions Total (d) from Previous Year's Attachment A, in Tons:			
(g) Current 12-month Total of CO Emissions in Tons: [(d) + (e) - (f)]			

- (a) Total amount of fuel or wood combusted;
  - (b) Use the appropriate emission factor;
  - (c) Column A x Column B x 0.0005;
  - (d) Summation of [Column C] in Tons;
  - (e) 12-Month CO emissions total (g) from last month's Attachment A, in Tons;
  - (f) Monthly CO emissions total (d) from previous year's Attachment A, in Tons;
- Calculate the new 12-month CO emissions total. **A 12-Month CO emissions total (g) of less than 250.0 tons indicates compliance.**

Mr. Nathan Turner  
Engineer  
Independent Stave Company Inc.  
1078 South Jefferson, P.O. Box 104  
Lebanon, MO 65536

RE: New Source Review Permit - Project Number: 2006-05-038

Dear Mr. Turner:

Enclosed with this letter is your permit to construct. Please study it carefully. Also, note the special conditions, if any, on the accompanying pages. The document entitled, "Review of Application for Authority to Construct," is part of the permit and should be kept with this permit in your files.

Operation in accordance with these conditions, your new source review permit application and with your revised operating permit is necessary for continued compliance.

The reverse side of your permit certificate has important information concerning standard permit conditions and your rights and obligations under the laws and regulations of the State of Missouri.

If you have any questions regarding this permit, please do not hesitate to contact me at (573) 751-4817, or you may write to me at the Department of Natural Resources, Air Pollution Control Program, P.O. Box 176, Jefferson City, MO 65102.

Sincerely,

AIR POLLUTION CONTROL PROGRAM

Kendall B. Hale  
New Source Review Unit Chief

KBH:shl

Enclosures

c: Southwest Regional Office  
PAMS File 2006-05-038  
Permit Number: